(12) INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(19) World Intellectual Property Organization
International Bureau

(43) International Publication Date
23 December 2004 (23.12.2004)

PCT

(10) International Publication Number
WO 2004/111527 A1

(51) International Patent Classification[7]: F17C 9/02, 7/04

(21) International Application Number:
PCT/EP2004/006435

(22) International Filing Date: 15 June 2004 (15.06.2004)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:
03425392.2 16 June 2003 (16.06.2003) EP
03425780.8 4 December 2003 (04.12.2003) EP

(71) Applicant *(for all designated States except US)*: **SINCRON S.R.L.** [IT/IT]; Via Cartesio, 2, I-20124 Milano (IT).

(72) Inventor; and

(75) Inventor/Applicant *(for US only)*: **RUSSO, Vitaliano** [IT/IT]; Via Burlamacchi, 11, I-20135 Milano (IT).

(74) Agents: **BOTTI, Mario-Vannini** et al.; Botti & Ferrari S.r.l., Via Locatelli, 5, I-20124 Milano (IT).

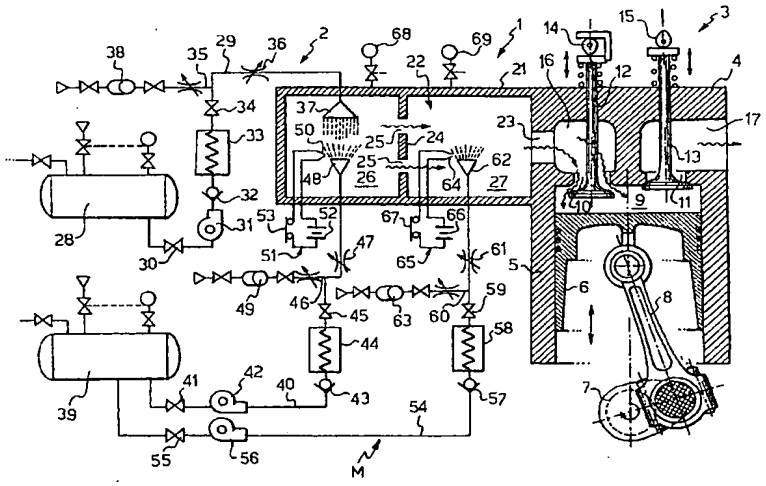
(81) Designated States *(unless otherwise indicated, for every kind of national protection available)*: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.

(84) Designated States *(unless otherwise indicated, for every kind of regional protection available)*: ARIPO (BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

Published:
— *with international search report*

For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

(54) Title: METHOD AND APPARATUS FOR GENERATING COMPRESSED AIR FROM LIQUEFIED AIR, FOR SUPPLYING COMPRESSED AIR TO AN ENGINE



(57) Abstract: An engine unit, particularly for urban transport, comprising an engine (3) supplied with a compressed gas and having a expansion chamber (9), a liquid gas tank (28) in communication with the engine (3), and means (M, M') for gasifying the liquid gas, which are interposed between the liquid gas tank (28) and the engine (3) for obtaining compressed gas. The gasifying means (M) comprise a gasification chamber (22) in communication with the liquid gas tank (28) and a liquid fuel tank (39) which is connected to the gasification chamber (22). The gasification chamber (22) is in fluid communication with both the liquid fuel tank (39) for the combustion of the liquid fuel with the oxygen of the liquid gas (22), and the expansion chamber (9) so that the compressed liquid gas and gaseous products of combustion process are used to do useful work.

WO 2004/111527 A1